

# TC16M 192

Bi-telecentric lens for 35 mm detectors, magnification 0.187 x, F-mount

Magnification	(x)	0,187
Image circle	(mm)	43,3

## Object field of view

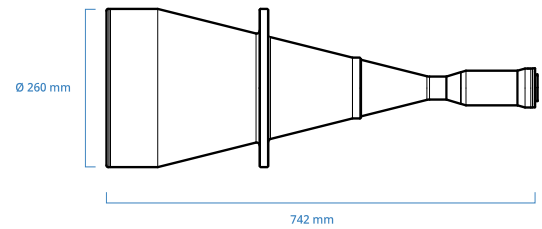
with 2k x 10 $\mu$ m detector	(mm)	109,5
with 4k x 7 $\mu$ m detector	(mm)	153,3
with 8k x 5 $\mu$ m detector	(mm)	219,0
with 36 x 24 mm detector	(mm x mm)	192 x 128

## Optical specifications

Working distance (1)	(mm)	457,5
f/# (2)		16
Telecentricity typical (max) (3)	(deg)	< 0.06 (0.08)
Distortion typical (max) (4)	(%)	< 0.05 (0.10)
Field depth (5)	(mm)	33
CTF@ 70 lp/mm	(%)	> 40

## Mechanical specifications

Mount		F
Length (6)	(mm)	742
Diameter	(mm)	260
Mass	(g)	10267



## NOTES

1. Working distance: distance between the front lens and the object. Set this distance within +/- 3% of the nominal value for maximum resolution and minimum distortion.
2. Working F-number: the real F-number of a lens when used as a macro. Lenses with smaller apertures can be supplied on request.
3. Maximum slope of chief rays inside the lens: when converted to milliradians, it gives the maximum measurement error for any millimeter of object displacement. Typical (average production) values and maximum (guaranteed) values are listed.
4. Percent deviation of the real image compared to an ideal, undistorted image: typical (average production) values and maximum (guaranteed) values are listed.
5. At the borders of the field depth the image can be still used for measurement but, to get a very sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 4.8  $\mu$ m.
6. Measured from the front end of the mechanics to the camera flange.